

What is claimed is:

1. A quality assured network service provision system compatible with a multi-domain network, wherein

a communication network comprising a plurality of operations management networks (domains) which are connected to a plurality of customer networks with user terminals and which are managed by different providers, includes:

a network service management device for managing collectively device clusters incorporated within an operations management network of each of said providers, and receiving service orders and faults information from customers; and

a service broker device at the functional host layer of said network service management device cluster for providing a broker function for achieving agreement between said plurality of providers.

2. A quality assured network service provision system compatible with a multi-domain network according to claim 1, wherein

said network service management device comprises an outputting device for outputting information on services which can be provided by each of said providers and domain information to said multi-service broker; and

said service broker device comprises a device for storing output information from each network service management device, selecting a network service management device of a domain which will satisfy a required quality level when a network service request is generated by a customer, and issuing instructions for introducing and setting necessary information.

3. A quality assured network service provision system compatible with a multi-domain network according to claim 2, wherein

said network service management device comprises an input and output device for input, by an operator, of information on services which can be provided by said provider and domain information made up of configuration information about an operations management network of said provider;

storage devices for storing information input from said input and output device by information type;

a workflow server for determining transfer destinations for processing commands based on each service request from a customer;

a bandwidth broker for registering said domain information and service information in said service broker device, and determining, in cooperation with said workflow server, a subject for executing a subsequent process; and

an internal processing system for performing processing management of information required by said communication device.

4. A quality assured network service provision system compatible with a multi-domain network according to claim 2, wherein

said service broker device comprises a storage device for storing service information and domain information received from said network service management device; and

a data processing device for performing information processing such as writing and reading of information to and from said storage device, as well as providing a security management function relative to said bandwidth broker.

5. A quality assured network service provision system compatible with a multi-domain network according to claim 3, wherein

said bandwidth broker and said workflow server have a means for deciding, based on logic, whether a subject for executing a subsequent process due to a customer service request is in an external system or an internal system; and

said bandwidth broker has a means for deciding a domain in cases where a subject for executing a subsequent process is in an external system; and

said workflow server has a means for deciding an internal processing system of a forward destination in cases where a subject for executing a subsequent process is in an internal system.

6. A quality assured network service provision system compatible with a multi-domain network according to claim 3, wherein

said service broker device has a means for referring to service information stored in said service storage section and deciding whether a subject for executing a subsequent process due to a customer service request is in an external system or an internal system;

a means for deciding an external forward destination in cases where a subject for executing a subsequent process is in an external system; and

a means for deciding an internal processing system of a forward destination in cases where a subject for executing a subsequent process is in an internal system.

7. A quality assured network service provision system compatible with a multi-domain network according to claim 3, wherein

said internal system comprises any one of a customer care server for managing

service order information received from customers,

5 a design server for managing network resources of an operations management network of a provider,

a policy server for reading pre-recorded policy information, as well as converting said policy information into setting information for a communication device of a specific vendor, and performing provisioning of a communication device for the

10 provision of a service, and

a network management device for providing a network fault management function for a configuration management and open channel incorporating communication devices within an operations management network of a provider and connection configuration of circuitry for connecting said communication devices,

15 each of which is connected to said workflow server.

8. A method of providing a quality assured network service compatible with a multi-domain network comprising

a plurality of domains which are connected to a plurality of customer networks with user terminals and which are managed by different providers, and incorporating

5 a network service management device for controlling collectively device clusters incorporated within an operations management network of each of said providers, as well as receiving service orders and faults information from customers, and

a service broker device at the functional host layer of said network service management device cluster for providing a broker function for achieving agreement

10 between said plurality of providers, wherein said method comprises:

a service registration step in which a network management device of each provider registers in said service broker device, domain information comprising

configuration information and information on services which can be provided,

a service agreement step in which a request is received from a customer, said
 15 service broker device and said network management device reach an agreement relating
 to service conditions for providing a service which will satisfy a required quality level,
 and route information for an appropriate domain and a network management device are
 selected, and

a service provisioning step for performing required service provisioning on a
 20 communication device based on service conditions and route information agreed upon in
 said network management device.

9. A method of providing a quality assured network service compatible with a
 multi-domain network according to claim 8, wherein said service provisioning step
 further comprises a step for service order processing, a step for route design processing,
 and a step for provisioning processing.

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10. A service broker device in an interconnected network for providing, in a
 network comprising a plurality of operations management networks which are connected
 to a plurality of customer networks with user terminals and which are managed by
 different providers,

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a broker function for achieving agreement between a plurality of providers
 based on configuration information and information on the services which can be
 provided by each provider network.